

Claims

What is claimed is:

1. An agricultural, horticultural, or ornamental crop composition
5 comprising:
 - (a) particulate material;
 - (b) organic non-vegetable non-fuel high boiling oil; and
 - (c) at least one additive selected from the group consisting of ionic salt,
colored particle, or surfactant.
- 10 2. The composition of claim 1 wherein said particulate material (a) is selected from the group consisting of calcium carbonate, talc, kaolin, beneficiated kaolin, bentonites, clays, pyrophyllite, silica, feldspar, sand, quartz, chalk, limestone, precipitated calcium carbonate, diatomaceous earth, and barites.
- 15 3. The composition of claim 1 wherein said particulate material (a) is selected from the group consisting of calcined calcium carbonate, calcined talc, calcined kaolin, baked kaolin, fired kaolin, hydrophobic treated heat treated kaolin, calcined bentonites, calcined clays, calcined pyrophyllite, calcined silica, calcined
20 feldspar, calcined sand, calcined quartz, calcined chalk, calcined limestone, calcined precipitated calcium carbonate, baked calcium carbonate, calcined diatomaceous earth, calcined barytes, calcined aluminum trihydrate, calcined pyrogenic silica, and calcined titanium dioxide.
- 25 4. The composition of claim 1 wherein said organic non-vegetable non-fuel high boiling oil (b) is selected from the group consisting of industrial oil, marine oil, saturated and unsaturated C-6 to C-32 fatty acids, animal oil, synthetic oil, and petroleum based oil.
- 30 5. The composition of claim 1 wherein said ionic salt (c) is selected from the group consisting of sodium chloride, potassium chloride, calcium chloride,

4829A

magnesium chloride, sodium sulfate, potassium sulfate, calcium sulfate, magnesium sulfate, sodium nitrate, potassium nitrate, calcium nitrate, magnesium nitrate, sodium carbonate, potassium carbonate, magnesium carbonate, sodium nitrite, potassium nitrite, copper based salt, silver based salt, potassium sulfate, and organic water soluble salts.

6. The composition of claim 1 wherein said colorant (c) is selected from the group consisting of natural iron oxides, black iron oxides, synthetic iron oxides, precipitated red iron oxide, brown iron oxides, synthetic black iron oxides, copper-black, chrome-black, zinc magnesium ferrite pigments, carbon black pigments, graphite, aniline black, logwood black lakes, yellow sulfur, and pigments that selectively reflect or absorb in red, blue, or green regions.

7. The composition of claim 6 wherein said colorant (c) is selected from the group consisting of yellow limonite, red hematite, brown limonite, Pigment Black 10, copper red, ferrite red, precipitated red iron oxide, Pigment Brown 6, brown ocher, Pigment Black 1, synthetic magnetite, copper-black, chrome-black, Pigment Brown 11, mapioc tans, Pigment Black 6, Pigment Black 7, furnace black, channel black, acetylene black, furnace black, bone black, lampblack, natural and synthetic graphites, Pigment Black 1, Natural Black 3, Lake, and Logwood Pigment.

8. The composition of claim 1 wherein said particulate material is a hydrous kaolin.

9. The composition of claim 1 wherein surfactant (c) is selected from the group consisting of modified phthalic glycerol alkyl resins, plant oil based materials with emulsifiers, polymeric terpenes, and nonionic detergents.

10. The composition of claim 1 wherein at least two of said additives (c) are present.

4829A

11. A bloom thinning emulsion comprising said composition of claim 1 and additionally comprising water.

12. A method of controlling pests comprising the step of:
5 applying to a substrate a composition comprising:
(a) particulate material;
(b) organic non-vegetable non-fuel high boiling oil; and
(c) additive selected from the group consisting of ionic salt, colored particle,
or surfactant.

10

13. The method of claim 12 wherein said particulate material (a) is selected from the group consisting of calcium carbonate, talc, kaolin, beneficiated kaolin, bentonites, clays, pyrophyllite, silica, feldspar, sand, quartz, chalk, limestone, precipitated calcium carbonate, diatomaceous earth, and barites.

15

14. The method of claim 12 wherein said particulate material (a) is selected from the group consisting of calcined calcium carbonate, calcined talc, calcined kaolin, baked kaolin, fired kaolin, hydrophobic treated heat treated kaolin, calcined bentonites, calcined clays, calcined pyrophyllite, calcined silica, calcined feldspar, calcined sand, calcined quartz, calcined chalk, calcined limestone, calcined precipitated calcium carbonate, baked calcium carbonate, calcined diatomaceous earth, calcined barytes, calcined aluminum trihydrate, calcined pyrogenic silica, and calcined titanium dioxide.

20

15. The method of claim 12 wherein said non-vegetable non-fuel high boiling oil (b) is selected from the group consisting of industrial oil, marine oil, paraffin oils, saturated and unsaturated C-6 to C-32 fatty acids, animal oil, synthetic oil, and petroleum based oil.

25

16. The method of claim 12 wherein said ionic salt (c) is selected from the group consisting of sodium chloride, potassium chloride, calcium chloride,

30

4829A

magnesium chloride, sodium sulfate, potassium sulfate, calcium sulfate, magnesium sulfate, sodium nitrate, potassium nitrate, calcium nitrate, magnesium nitrate, sodium carbonate, potassium carbonate, magnesium carbonate, sodium nitrite, potassium nitrite, copper based salt, silver based salt, potassium sulfate, and organic water soluble salt.

17. The method of claim 12 wherein said colorant (c) is selected from the group consisting of natural iron oxides, black iron oxides, synthetic iron oxides, precipitated red iron oxide, brown iron oxides, synthetic black iron oxides, copper-black, chrome-black, zinc magnesium ferrite pigments, carbon black pigments, graphite, aniline black, logwood black lakes, yellow sulfur, and pigments that selectively reflect or absorb in red, blue, or green regions.

18. The method of claim 17 wherein said colorant (c) is selected from the group consisting of yellow limonite, red hematite, brown limonite, Pigment Black 10, copper red, ferrite red, precipitated red iron oxide, Pigment Brown 6, brown ocher, Pigment Black 1, synthetic magnetite, copper-black, chrome-black, Pigment Brown 11, mapioc tans, Pigment Black 6, Pigment Black 7, furnace black, channel black, acetylene black, furnace black, bone black, lampblack, natural and synthetic graphites, Pigment Black 1, Natural Black 3, Lake, and Logwood Pigment.

19. The method of claim 12 wherein said particulate material is a hydrous kaolin.

20. The method of claim 12 wherein surfactant (c) is selected from the group consisting of modified phthalic glycerol alkyl resins, plant oil based materials with emulsifiers, polymeric terpenes, and nonionic detergents.

21. The method of claim 12 wherein at least two of said additives (c) are present.

4829A

22. The method of claim 12 wherein said substrate is selected from the group consisting of soil; peat; compost; vermiculite; rockwool; synthetic growing media; weeds; weed roots; weed seeds; non-agricultural plants located near agricultural crops; and non-useful, non-ornamental plants.

5

23. The method of claim 12 wherein said composition additionally comprises (d) plant producing media selected from the group consisting of soil; peat; compost; vermiculite; rockwool; synthetic growing media, sand, soil remediation materials, polyacrylates, humus, and surface treated soil.